

Lycosid Spiders of Japan XII. The Genus *Pardosa* C. L. KOCH  
——*pullata*-group and *P. lyrivulva*——

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——*pullata* 種群および *lyrivulva*——

**Abstract** This paper, the twelfth of the series of “Lycosid Spiders of Japan,” contains two Japanese species, *Pardosa riparia* of the *pullata*-group and *Pardosa lyrivulva* which does not belong to any of the four known species-groups of this genus. These two species are redescribed in detail and illustrated. Characteristics of the *pullata*-group and *P. lyrivulva* are also given.

The *pullata*-group and *P. lyrivulva*

This group is very homogeneous; the separation of species is very difficult in the female, but in the male, the specific separation is very easy by the long median apophysis extending over margin of alveorus on palp (Figs. 3–4). The only one species *riparia* is included in this group in Japan.

*Pardosa lyrivulva* has been known with only one female specimen, and has one large genital opening in central part of epigynum (Fig. 5). By this characteristic, this species is clearly separated from the other four species-groups of the genus *Pardosa* in Japan.

*Pardosa riparia* (C. L. KOCH, 1848)

[Japanese name: Kishi-komorigumo]

(Figs. 1–4)

*Lycosa riparia* C. L. KOCH, 1833, Hft. 120, pl. 19, 1848, p. 29, figs. 1435–1436; THORELL, 1872, p. 307; MENGE, 1879, p. 551, pl. 90, fig. 315; DAHL, 1883, p. 68; CHYZER and KULCZYŃSKI, 1891, p. 58, pl. 2, fig. 14; BÖSENBERG, 1902, p. 383, pl. 36, fig. 562; STRAND, 1909, p. 78; SAITO, 1933, p. 129; PALMGREN, 1939, p. 47, figs. 44, 66; SAITO, 1941, p. 104, fig. 117.

*Lycosa cursoria* C. L. KOCH, 1848, p. 49; DAHL, 1908, pp. 379, 415, fig. 74; DAHL F. and M., 1927, p. 30, figs. 69–71; ROŚCA, 1936, p. 183, 1937, p. 14, 1938, p. 8.

*Leimonia riparia*: SIMON, 1864, p. 351; OHLERT, 1867, p. 134.

*Pardosa riparia*: SIMON, 1876, p. 334; LESSERT, 1910, p. 519; BONNET, 1958, p. 3417; TONGIORGI, 1966, p. 298, figs. 42–45; YAGINUMA, 1970, p. 667; TYSTSCHENKO, 1971, p. 178; YAGINUMA, 1977, p. 394; 1986, p. 165; IZUMAILOVA, 1989, p. 38, fig. 25; YAGINUMA, 1990, p. 267; TONGIORGI, 1991, pp. 330, 338, figs. 884 (1, 2, 3, 5).

*Pardosa kervillei* SIMON, 1937, pp. 1066, 1078, 1130, figs. 1654–1676; ROEWER, 1954, p. 164.

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*Female*

Specimen examined for description. Nishioboro, Akkeshi-gun, Hokkaido, 21. VI. 1978 (M. Suwa).

Measurements (mm). Total length 5.80. Carapace length 2.60, width 1.80. Abdomen length 3.20, width 2.10. Legs and palp as in Table 1.

Table 1. Length of legs and palp of 1♀ of *Pardosa riparia* (in mm).

Leg	Femur	Patella and tibia	Metatarsus	Tarsus	Total
I	2.00	2.50	1.65	0.90	7.05
II	1.90	2.40	1.50	1.10	6.90
III	1.90	2.30	1.80	1.10	7.10
IV	2.60	3.30	3.00	1.60	10.50
Palp	0.90	1.20	—	1.00	3.10

Carapace reddish brown, with a light yellow median band and continuous lateral bands. Median band with almost parallel-edges. AME<sup>1)</sup> larger than ALE<sup>1)</sup>; AME separated from each other by about half the diameter of AME, and from ALE by length being smaller than half the diameter of ALE. Clypeus light yellow-brown, about 1.5 times the diameter of AME. Chelicerae reddish yellow-brown. Maxillae light yellow-brown. Labium reddish brown, with light yellow-brown in front. Sternum dark reddish brown. Abdomen reddish brown in dorsal surface, with some pairs of black spots; a lanceolate median mark indistinct; sides yellow-brown, with black markings; ventral surface yellow-brown. Legs yellow-brown, with distinct annulations on femora I–IV, and indistinct ones on patellae and tibiae I–IV. Palp yellow-brown, with faint annulations on femora. Epigynum with a central chitinous plate and with two large genital openings at both sides as in Fig. 1; a pair of spermathecae slender (Fig. 2).

Table 2. Length of legs and palp of 1♂ of *Pardosa riparia* (in mm).

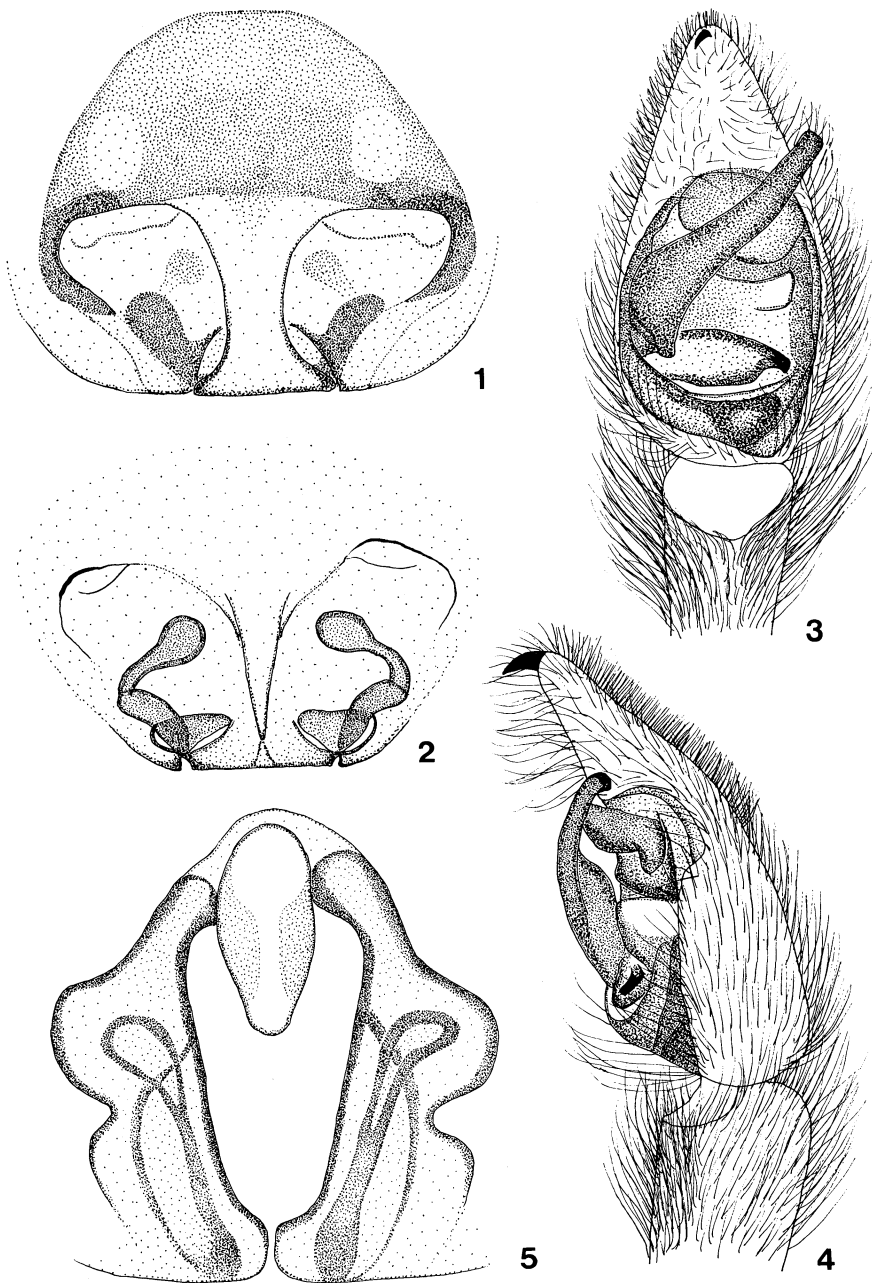
Leg	Femur	Patella and tibia	Metatarsus	Tarsus	Total
I	1.70	1.90	1.60	1.10	6.30
II	2.00	2.30	1.70	1.20	7.20
III	1.90	2.20	1.90	1.10	7.10
IV	2.60	3.20	3.15	1.60	10.55
Palp	0.90	0.90	—	1.00	2.80

*Male*

Specimen examined for description. Nishioboro, Akkeshi-gun, Hokkaido, 21. VI. 1978 (M. Suwa).

Measurements (mm). Total length 4.60. Carapace length 2.60, width 1.90. Abdomen length 2.00, width 1.30. Legs and palp as in Table 2.

1) Abbreviations: AME, anterior median eye, ALE, anterior lateral eye.



Figs. 1-5. 1-4, *Pardosa riparia* (C. L. KOCH); 5, *Pardosa lyrivulva* (BÖSENBERG et STRAND).—1, 5, Epigynum (ventral view). 2, Epigynum (dorsal view). 3, Male palp (ventral view). 4, Male palp (retrolateral view).

Carapace dark brown, with a narrow light yellow median band and indistinct dark yellow lateral bands; head region almost black. Eyes same as in female. Clypeus dark yellow-brown. Chelicerae and maxillae blackish grey. Labium blackish grey, with whitish yellow front. Sternum almost black. Abdomen dark brown in dorsal surface, with some pairs of black areas; a lanceolate median mark distinct and edged by a black line along the margin; lateral and ventral surfaces almost black, with yellow-brown spots and markings. Legs light yellow-brown, except for dark brown femora I–IV; femora I–IV with distinct annulations. Palp uniformly and almost black; tarsal organs (Figs. 3–4) with a very long and robust median apophysis extending over margin of alveolus; tarsus with one claw.

Variation. Based on several individuals, following ranges of body sizes are shown (mm). Total length ♀ 4.55–5.80, ♂ 4.20–5.45. Carapace length ♀ 2.30–2.75, ♂ 2.25–2.90; width ♀ 1.75–2.05, ♂ 1.70–2.00. Abdomen length ♀ 2.25–2.70, ♂ 1.95–2.65; width ♀ 1.45–2.10, ♂ 1.20–1.70.

Materials examined. Hokkaido: — 1♂, Yamubetsu, Shari-gun, 11. VI. 1978 (M. SUWA); 2♀, 1♂, Atsutoko, Nemuro-shi, 2. VI. 1978 (M. SUWA); 2♀, 5♂, Nishioboro, Akkeshi-gun, 21. VI. 1978 (M. SUWA); 1♂, Daisetsuko, Kamikawa-cho, 11. VII. 1983 (N. YASUDA); 1♂, Horokayantou-numa, Daijyu-cho, 23. V.–9. VI. 1993 (K. SHIBATA); 1♀ Kiritappu-shitsugen, Hamanaka-cho, 13. VIII. 1986 (A. TANIKAWA). Honshu—1♂, Oze, Tone-gun, Gunma Pref., 3. VII. 1981 (A. TANIKAWA); 2♀, 4♂, same locality, 3. VIII. 1988 (T. YAMANO).

Distribution. Japan (Hokkaido and Honshu); widely distributed in the Palaearctic region.

Biological notes. The spiders of this species live in meadows and pastures. Mature spiders are found at the beginning of June. The form of egg sac, the number of egg sacs laid by a female, number and size of eggs and the egg-laying behaviour have not yet been made clear.

Remarks. This species is very closely related to *P. prativaga* (L. KOCH, 1870) from Europe, but is easily distinguished from the latter by the number of tarsal claw of the male palp.

### *Pardosa lyrivulva* (BÖSENBERG et STRAND, 1906)

[Japanese name: Konpira-komorigumo]

(Fig. 5)

*Lycosa lyrivulva* BÖSENBERG et STRAND, 1906, p. 326; SAITO, 1941, p. 101.

*Pardosa lyrivulva*: ROEWER, 1954, p. 167; BONNET, 1958, p. 3385; YAGINUMA, 1970, p. 667; 1977, p. 394; 1986, p. 165, fig. 90; PLATNICK, 1989, p. 380; YAGINUMA, 1990, p. 266.

#### *Female*

Specimen examined for description. The holotype.

Measurements (mm). Total length 5.95. Carapace length 2.70, width 2.10. Abdomen length 3.25, width 2.00. Legs and palp as in Table 3.

Carapace whitish yellow-brown, with two dark yellow-brown median bands and a very dark brown narrow line along margin. AME larger than ALE; AME separated from each other by the diameter of ALE and from ALE by length being smaller than half the diameter of AME. Clypeus light yellow-brown, about the diameter of AME. Chelicerae, maxillae and labium yellow-brown. Sternum

Table 3. Length of legs and palp of 1♀ of *Pardosa lyrivulva* (in mm).

Leg	Femur	Patella and tibia	Metatarsus	Tarsus	Total
I	2.10	2.70	1.60	1.10	7.50
II	1.95	2.45	1.50	1.10	7.00
III	1.90	2.30	1.85	0.95	7.00
IV	2.70	3.30	3.15	1.45	10.60
Palp	1.00	1.10	—	0.90	3.00

uniformly whitish yellow-brown. Abdomen light yellow-brown in dorsal surface, with five pairs of black dots in the light yellow-brown circles and with many dark brown irregular markings; a lanceolate median mark indistinct; sides light yellow-brown, with yellow-brown markings; ventral surface light yellow-brown. Legs light yellow-brown with very faint annulations on femora I–IV. Palp light yellow-brown. Epigynum with a large genital opening at central part; a pair of long narrow spermathecae present through body wall (Fig. 5).

*Male* unknown.

Material examined. Kyushu: — 1♀ (holotype, SMF-2312), Konpira, Saga Pref. (W. DÖNITZ).

Distribution. Japan (Kyushu).

Remarks. No specimen of this species has been collected in Japan since it was described by BÖSENBERG and STRAND in 1906. Therefore, the biology is unknown. By the presence of the large genital openings of the central part (Fig. 5) of epigynum, this species is distinct and can not be confused with any other described species. In this paper, I make no mention of the definite conclusion with respect to the species-group, as I examined only one female spider.

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### 摘 要

日本から得られた *Pardosa* 属, *pullata* 種群に含まれる1種, *Pardosa riparia* (C.L. KOCH) (キシコモリグモ) および, どのグループにも含まれない1種, *P. lyrivulva* (BÖSENBERG et STRAND) (コンピラコモリグモ) の再記載を行った。

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